

LISTING OF CLAIMS

1. (currently amended) A method for managing data communications between hosts of a switched Ethernet network, the method comprising:

a switch of said network dynamically assigning hosts to logical groups of hosts for a session in response to a session request such that the hosts participating in a data communication are assigned to the same group;

said switch of the network, associating each said group with a service class indicative of requirements for forwarding data across the switch for data communications between hosts in the group during said session, and forwarding received data across the switch for each of a plurality of groups in a manner dependent on the service class of each ~~the~~ group to which hosts participating in the data communication are assigned;

in the switch, monitoring traffic congestion; and

in the switch, disabling data communications between hosts in one or more of said plurality of groups when required based on said traffic congestion to satisfy the forwarding requirements for at least one said service class.

2. (previously presented) The method as claimed in claim 1 wherein data communications are disabled for a said group by discarding data received from any host in that group.

3. (canceled)

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4. (previously presented) The method as claimed in claim 1 wherein the step of assigning hosts to a logical group comprises allocating a group identifier to hosts in that group.

5. (previously presented) The method as claimed in claim 1 wherein each said logical group comprises a VLAN, and wherein the step of assigning hosts to a logical group comprises allocating a VLAN identifier to hosts in that group.

6. (previously presented) The method as claimed in claim 4 wherein a group is associated with a service claim by storing data packets transmitted between hosts in that group.

7. (previously presented) The method as claimed in claim 4 including inserting the identifier allocated to a said group in data packets transmitted between hosts in that group.

8. (previously presented) The method as claimed in claim 7 wherein, for at least one said group, the identifier is inserted in data packets by hosts in that group.

9. (previously presented) The method as claimed in claim 7 wherein, for at least one said group, the identifier is inserted by the switch in data packets received from a host in that group.

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10. (previously presented) The method as claimed in claim 1 wherein a high-priority service class and a low-priority service class are defined in the switch, whereby forwarding of received data from hosts in groups associated with the high-priority service class takes precedence over forwarding of received data from hosts in groups associated with the low-priority service class.

11. (previously presented) The method as claimed in claim 10 including, for at least one said group associated with the high-priority service class, calculating a transmission schedule in the switch indicating time periods for receiving data from hosts in the group such that the data received during said time periods will be forwarded by the switch in accordance with the high-priority service class, the schedule being calculated in dependence on the bandwidth required for data communications between hosts in the group.

12. (previously presented) The method as claimed in claim 11 including disabling data communications outside the scheduled time periods for the or each said group associated with the high-priority service class when required to satisfy the forwarding requirements of the high-priority service class.

13. (previously presented) The method as claimed in claim 11 including sending the transmission schedule calculated for a said group to the or each transmitting host in the group.

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14. (previously presented) The method as claimed in claim 10 wherein the low-priority service class is defined in the switch for best-effort forwarding of received data.

15. (previously presented) The method as claimed in claim 14 including assigning all hosts participating in best-effort data communications to one said group associated with the low-priority service class.

16. (previously presented) The method as claimed in claim 1 wherein a plurality of different-priority service classes are defined in the switch, whereby forwarding of received data from hosts in groups associated with each of said different-priority service classes takes precedence over forwarding of received data from hosts in groups associated with any lower-priority service classes, the method including disabling data communications for groups associated with one or more low-priority service classes when required to satisfy the forwarding requirements of one or more higher-priority service classes.

17. (currently amended) A switch for connection in a switched Ethernet network, the switch comprising:

switching circuitry for forwarding across the switch of data received at a port of the switch;

assignment means for dynamically assigning hosts in the network to logical groups of hosts for a session in response to a session request;

memory for storing data indicative of an assignment of hosts in the network to logical groups of hosts, said

assignment being such that the hosts participating in the data communication are assigned to the same group; and

control logic for associating each said group with a service class indicative of requirements for forwarding data across the switch for data communications between hosts in the group during the session, and for controlling forwarding of received data for each of a plurality of groups by the switching circuitry in a manner dependent on the service class of each ~~the~~ group to which hosts participating in the data communication are assigned;

wherein the control logic is configured to disable data communications between hosts in one or more of said plurality of groups when required to satisfy the forwarding requirements for at least one said service class.

18. (previously presented) A switched Ethernet network comprising at least one switch as claimed in claim 17, and a plurality of hosts connected to ports of said at least one switch.

19. (currently amended) A computer program element comprising computer program code means which, when loaded in a processor of a switch for connection in a switched Ethernet network configures the processor to:

dynamically assign hosts of the network to logical groups of hosts for a session in response to a session request;

associate each said group with a service class indicative of requirements for forwarding data across the switch for data communications between hosts in the group during the session, and to control forwarding of received

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data across the switch for a plurality of groups in a manner dependent on the service class of each ~~the~~ group to which hosts participating in the data communication are assigned; and

disable data communications between hosts in one or more of said plurality of groups when required to satisfy the forwarding requirements for at least one said service class.

20. (previously presented) A computer program element comprising computer program code means which, when loaded in a processor of a switch for connection in a switched Ethernet network, configures the processor to perform a method as claimed in claim 1.

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